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ORIGINAL COMMUNICATIONS.

PHYSIOLOGICAL ACTION OF LYCOCTONIA.

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LYCOCTONIA and napellina were distinguished as separate alkaloids from aconitia by Hürschmann. He procured them from Aconitum lycoctonum. The specimen used by me was made by Trommsdorf, and was a white crystalline powder. Bromine-water added to it gave a yellow precipitate, Nessler's reagent precipitated it largely, sulphuric acid gave a colorless solution, as did also phosphoric with heat. In the succeeding experiments each cubic centimetre of our neutral solution contained a centigramme of the alkaloid in shape of acetate. Klebs made some unpublished experiments with it, and inferred that it was much less energetic than aconitia.

Bucheim and Eisenmenger* made a few experiments on frogs. They saw muscular movements, convulsions, extended extremities, loss of reflex action, with the presence of muscular contractility, contracted pupil, and few respirations. They used doses varying from .0015 to .005 gramme.

Schroff† saw in two men .05 gramme of the acetate produce at first an increased frequency of pulse. In a rabbit .4 gramme by mouth produced increase of pulse and decrease of respiratory movement, with subsequent fall of the former. The pupil was dilated, and the movements wholly undisturbed; the animal recovered.

In another rabbit .4 gramme subcutaneously caused dilated pupil, very frequent pulse and respiration. With doses of .005 to .06 gramme subcutaneously in frogs, sensibility remained intact, the spinal cord appeared not directly affected, the motor nerves were paralyzed, muscles excitable, pupil contracted, disappearance of respiratory movements, heart beating for a very long time after the absence of every sign of life.

Exp. I.—Frog. Weight, sixteen grammes; at 8.46 A.M. received .05 gramme lycoctonia subcutaneously; leaps away; respiratory movements less frequent. 8.49 A.M., complete relaxation; pupil contracted, respiratory movement now and then. 9 A.M., death; motor nerves not irritable; heart beat forty-eight per minute, and was beating still an hour afterwards.

Exp. II.—Frog. Weight, 29.3 grammes; at 8.42 A.M. received subcutaneously .1 gramme of lycoctonia. 8.45 A.M., respirations less frequent; lying on abdomen; great want of co-ordination; loss of movement in posterior extremities. 8.50 A.M., pupil contracted; occasional respiratory movement. 9.5 A.M., .1 gramme under the skin in the vicinity of the lymph-sacs. Mechanical irritation causes muscular twitchings. 9.53 A.M., death; motor nerves irritable only with strongest currents of Dubois's induction-apparatus with Helmholtz's arrangement; thrusting probe down the spine caused no movement; heart beat thirty-two per minute, and continued its movements for over an hour.

The above experiments represent the action of lycoctonia, that it paralyzes the motor nerves or diminishes their irritability.

In the majority of cases I found the motor nerves completely non-irritable; but in some frogs, without regard to species, and even in the same species, the motor nerves were not completely paralyzed. A similar action has been observed by Boehm on frogs with aconitia.

The heart was always beating, lycoctonia not being a cardiac poison in frogs like aconitia, as the following experiment with the latter shows.

Exp. III.—Frog. Weight, forty-nine grammes; received subcutaneously at 9 A.M. .025 gramme of aconitia of Menck's in shape of acetate; leaps away; lower jaw drooping. 9.08 A.M., complete relaxation; slight movement on mechanical irritation.

9.15 A.M., death; ventricle in complete diastole, no movement in it; auricle beating now and then.

To study the action on the sensory nerves and spinal cord I used the method of Bernard.

Exp. IV.—Frog. Weight, fifty grammes. At 9.10 A.M., received .1 gramme of lycoctonia, the right iliac artery and vein tied previously. 9.12 A.M., diminished respiration; want of co-ordination and power; pupil contracted; mechanical irritation calls out movement only in leg in which supply of poison is shut off; respirations now and then.

9.43 A.M., death; motor nerves upon which the poison acted non-excitable; gastrocnemii of either side equally irritable; heart beat thirty per minute, and pulsated over an hour afterwards.

Exp. V.—Frog. Weight, thirty-nine grammes; right iliac artery and vein ligated; received at 9.53 A.M. .1 gramme lycoctonia

* Eckhard's Beiträge, fünfter Band, zweites Heft.
† Beitrag zur Kenntniss des Aconit.

subcutaneously. 9.55 A.M., loss of co-ordination; occasional respiratory movements. 10.14 A.M., pupil contracted from position; pinching causes movement only in the limbs in which the access of the poison has been prohibited. 10.18 A.M., .1 gramme lycoctonia subcutaneously. 10.40 A.M., death; sciatic nerve on left side not irritable, but irritation of its central end called out movements in right posterior extremity; right and left gastrocnemius equally irritable; heart beat twenty-four per minute.

These observations show conclusively that the sensory nerves and spinal cord are not affected by this alkaloid.

To study the action on the muscle I used Marey's myograph and Foucicault's regulator, after the method laid down by Marey. In no case did I find any prolongation of the curve as produced by veratria, or as Weyland states takes place under aconitia. Boehm and Wartmann were unable to confirm this discovery of Weyland's.

Exp. VI.—Large rabbit received at 12.32 P.M. .1 gramme of lycoctonia into arterial system; the animal immediately became quiet and was unable to stand.

12.35 P.M., .1 gramme injected into arterial system. 12.42 P.M., .1 gramme injected into arterial system. Convulsions, with clonic contractions of muscles of neck and jaws; respirations ceased. 12.43 P.M., death; heart beating.

Exp. VII.—Small rabbit received, per jugular, .1 gramme of lycoctonia; at 9.43 A.M. unable to maintain an erect posture; convulsive movements; pupil dilating; convulsive action of muscles about the neck; respiratory movements ceased.

9.57 A.M., death, heart beating.

It is evident that lycoctonia is a poison which kills mainly by arrest of respiratory apparatus, as cardiac movements continue after death.

Circulation.

The action on the circulation was studied on rabbits. I made sixteen experiments. The animals were narcotized by morphia. In all other respects everything was conducted in the same manner as laid down in my paper on gelsemia. The pressure and pulsations are given for periods of fifteen seconds.

Exp. I.—Rabbit. Curare; tracheotomy; artificial respiration; jugular and carotid prepared.

Time.	Pulse.	Pressure.	
A.M.	67	102	
			Lycoctonia .1 grm.
8.20.15	43	66	
8.20.30	37	54	
8.20.45	31	46	
8.21.30	48	42	
8.21.45	47	44	
8.59.00	50	82	
			Lycoctonia .1 grm.
8.59.15	46	82	
9.00.00	33	60	
9.00.15	32	70	
9.06.15	49	60	

Exp. II.—Rabbit. Curare; artificial respiration; carotid and jugular prepared; tracheotomy.

Time.	Pulse.	Pressure.	
A.M.	75	100	
			Lycoctonia .05 grm.
10.05.15	72	98	
10.05.30	59	84	
10.06.00	64	84	
10.08.00	56	90	
10.09.15	66	24	
10.37.30	66	24	

The preceding experiments show that the action of lycoctonia is a reduction of the pulse and pressure. Immediately after the injection the pulse-waves are considerably greater and steeper. In small doses, like aconitia, its action on the heart causes a delirium cordis, that is, periods where the pulse is suddenly greatly slowed whilst the pressure also rises and falls in a manner not to be predicted. Unlike the action of aconitia, the blood-pressure in rabbits never suffers a preliminary rise. This series of results can happen either by a central or a peripheral excitation of the pneumogastrics. In nicotin and atropin we have an agent that paralyzes the peripheral end of the vagi. Schmiedeberg* has shown that in a heart stopped by muscarin, which greatly excites the cardio-inhibitory ganglia, nicotin is unable to start the heart, whilst atropin does. This led him to infer that nicotin paralyzes the nerves uniting the peripheral end of the vagi to the cardio-inhibitory ganglia, and that atropin paralyzes the ganglia themselves.

Exp. III.—Rabbit. Tracheotomy; curare; artificial respiration; carotid and jugular prepared; vagi cut.

Time.	Pulse.	Pressure.	
A.M.	78	106	
			Lycoctonia .1 grm.
10.45.00	71	90	
10.45.30	48	36	
10.45.45	49	30	
10.46.30	63	30	
10.51.30	75	70	
10.55.45	60	82	
11.17.30	65	72	

* Ludwig's Arbeiten, 1870.

Exp. IV.—Rabbit. Tracheotomy; curare; artificial respiration; atropin; carotid and jugular prepared; paralysis of vagi as tested by strong currents.

Time.	Pulse.	Pressure.	
P.M.	60	130	
			Lycoctonia .1 grm.
6.00.15	57	100	
6.00.30	56	68	
6.01.00	50	38	
6.01.15	48	40	
6.10.30	59	120	Coagulation.
6.11.15	60	118	
6.12.00	61	120	
6.12.45	64	118	

Exp. V.—Rabbit. Tracheotomy; curare; vagi paralyzed by nicotin as proved by irritating with strong currents. Carotid and jugular prepared; artificial respiration.

Time.	Pulse.	Pressure.	
A.M.			
9.00.00	70	118	
			Lycoctonia .1 grm.
9.01.00	62	54	
9.01.15	62	55	
9.01.30	67	54	
9.21.53	57	108	Coagulation.

These observations show conclusively that the sinking of pulse and pressure has not its seat either in a central or peripheral stimulation of the cardio-inhibitory apparatus. The peculiar paroxysmal action of the heart continues after the use of atropin. That the vagi are not paralyzed by small doses the following observations show.

Exp. VI.—Rabbit. Tracheotomy; curare; artificial respiration; carotid and jugular prepared; left vagus prepared.

Time.	Pulse.	Pressure.	
P.M.	68	126	
			Lycoctonia .05 grm.
3.50.00	63	126	
3.50.15	78	120	
3.51.00	63	124	
4.06.15	62	96	
4.07.00	62	78	
			Lycoctonia .05 grm.
4.07.15	58	77	
4.07.30	55	64	
4.08.00	57	68	
4.09.30	46	102	
4.12.45	55	108	
			Lycoctonia .05 grm.
4.13.15	61	116	
4.13.30	49	111	Vagus irritated for three seconds. Dubois's secondary coil at 4.
4.19.55	58	120	
			Lycoctonia .05 grm.
4.20.10	63	113	
4.20.25	61	114	
4.21.00	51	110	Vagus irritated for one second. Dubois's coil at 4.
4.24.30	52	130	
Time.	Pulse.	Pressure.	
			Lycoctonia .05 grm.
4.24.45	58	120	
4.45.19	60	128	
4.45.34	36	110	Vagus irritated four seconds. Dubois's coil at 4.

Exp. VII.—Rabbit. Right vagus prepared; canula in jugular; Middeldorpf's needle used to observe the action of the heart.

Time.	
P.M.	
2.15	Dubois's coil at 11. Stops heart. Lycoctonia .1 gramme.
2.18	Dubois's coil at 11. Slows the heart.
2.24	Lycoctonia .4 gramme.
2.26	Artificial respiration.
2.33	Dubois's coil at 0. slows the heart.
2.43	Dubois's coil at 0. no power over the heart.

Exp. VII. shows that large doses are able to paralyze the vagi, for when the secondary coil was shoved over the primary the pneumogastric had no action on the heart.

Exp. VIII.—Rabbit. Tracheotomy; curare; artificial respiration; carotid, jugular, and sciatic nerve prepared; Ludwig's screw-electrode fastened into the atlas and occiput; Pohl's commutator so arranged that the current of electricity can be sent either to the sciatic nerve or the vaso-motor centre by rolling the cradle.

Time.	Pulse.	Pressure.	
A.M.	57	94	
			Lycoctonia .05 grm.
10.46.15	55	76	
10.46.30	53	80	
10.46.45	51	54	
10.47.30	51	60	
10.52.00 to 11.02.05			Lycoctonia .15 grm.
11.03.10	56	90	
11.03.25	54	102	Vaso-motor centre irritated indirectly for two seconds. Dubois's coil at 16.
11.08.28	44	84	
11.16.01	50	62	Depressor nerve irritated for eleven seconds. Dubois's coil at 16.
11.34.01 to 12.16.56			Lycoctonia .250grm.
12.19.17	40	48	
12.19.32	45	70	Vaso-motor centre irritated indirectly for nine seconds. Dubois's coil at 16.
12.24.36	54	94	
12.24.51	45	120	Vaso-motor centre directly irritated for six seconds. Dubois's coil at 5.

In Exp. VIII. I have tried to see if the alkaloid paralyzes the vaso-motor centre. Unlike aconitia, it does not, either to direct or indirect irritation. It is quite probable that enormous doses might do so; but that large doses do so is not tenable. This experiment also confirms the view that this poison does not act on the sensory nerves or the spinal cord.

Exp. IX.—Rabbit. Tracheotomy; curare; artificial respiration; carotid and jugular prepared; all cardiac nerves in neck are cut; cord cut between the atlas and occiput; hemorrhage checked by bovista.

Time.	Pulse.	Pressure.	
P.M.	54	52	
			Lycoctonia .1 grm.
2.08.15	42	52	
2.08.30	37	34	
2.08.45	26	28	
2.09.30	33	19	
2.15.15	30	22	

In the ninth experiment the heart is entirely freed from its afferent and efferent nerves. Here the same change takes place, —that is, fall of pulse and of pressure.

It is evident that the fall of pressure and of pulse is due to diminished excitability of the heart, and, as the striated muscles are not affected by the poison, it must be due to the nervous mechanism being changed. But how are we to explain the paroxysmal changes of pulse and pressure, the delirium cordis? Heidenhain, on irritating directly the vaso-motor centre after previous section of the vagi and artificial respiration, observed the following: when strong currents were used there ensued a want of rhythm similar in appearance to that observed after the use of lycoctonia. He had to deal with a high pressure in the circulatory system. He then sought out the cause of this want of rhythm, whether it was seated in the cardiac nerves or the heart itself. After separation of the cardiac nervous apparatus external to the heart, he found it to be localized in the heart itself. He then thought it must be either in a weakening of the motor ganglia of the heart or increased action of the inhibitory ganglia. The weakening of the motor ganglia seemed to him to fail utterly in accounting for this appearance. His conclusion was that high pressure irritates the cardio-inhibitory ganglia, and thus causes these paroxysms, but when their excitability sinks the want of rhythm disappears; that this delirium is an expression of the antagonism of the forces of the cardio-motor and cardio-inhibitory ganglia, and irritation of the vagi for very short periods gave curves precisely similar. Atropin did not prevent this want of cardiac rhythm, which caused Heidenhain to doubt if it paralyzed all the inhibitory ganglia. Boehm and Wartmann, who observed a similar want of rhythm after small doses of aconitia, think that it is probable that an excitation of the cardio-inhibitory apparatus is called into play, or that aconitia antagonizes the paralytic effect of atropin.

Mr. Lewin explains the want of rhythm after aconitia by an action at dissimilar times and unequal in strength upon one or the other intracardiac nervous apparatus, probably produced by an unequal division of the alkaloid in the blood. It is difficult to see how an unequal distribution of this poison in the circulatory system can occur. It cannot be through any change in the coronary vessels, as the same paroxysms occur in a frog's heart, which has been shown by Hyrtl to be devoid of blood-vessels. Certainly in the case of lycoctonia high pressure does not irritate the inhibitory mechanism, and atropin does not prevent the want of rhythm. Either one must assume that atropin does not completely paralyze all the inhibitory ganglia, or that lycoctonia antagonizes it.

To my mind neither explanation is sufficient. The recent experiments of Bowditch, Luciani and Rorsberel, and Kronecker, seem to be near the discovery of the real cause.

The following expresses my conclusions in regard to this poison:

1. Lycoctonia is a weaker toxicant than aconitia.

2. That it kills mainly through the respiratory apparatus.

3. That it paralyzes the motor nerves.

4. That it does not affect the sensory nerves, spinal cord, or the striated muscles.

5. That it reduces the blood-pressure and pulse without any previous rise of the former as produced by aconitia.

6. That the decreased pulse-rate and pressure are due to an action on the intracardiac nervous apparatus.

7. That the pneumogastrics are paralyzed only by large doses.

8. That the delirium cordis produced by small doses is due to a change in the mechanism of the nervous apparatus of the heart.

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PSEUDO-HYPERTROPHIC PARALYSIS.

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THE following cases of pseudo-hypertrophic or myo-sclerotic paralysis are of special interest, because they are typical examples of a very rare disease. The second case is still further interesting as showing the disease occurring in a female, which is exceedingly uncommon, since nearly all of the recorded cases have been males.

The patient W. K. was brought from Virginia in June last to see Dr. Mitchell, who kindly placed him under my observation and allowed me to take the following notes. S. C. (Case II.) appeared at the clinic of the Infirmary for Nervous Diseases in February, 1875, and was admitted into the wards. Her previous history is, unfortunately, incomplete, but through the kindness of Dr. J. L. Bodine, of Trenton, who saw her father for me, I succeeded in obtaining a few points in regard to the commencement of her trouble. Her condition on admission, however, was carefully taken by Dr. Sinkler and myself. The third case, R. P., was originally reported by Dr. Mitchell, in the *Philadelphia Photographic Review*, 1871. The patient is at present under my observation, and as there have been many changes in his condition since the time of the first report, I shall republish the case *in extenso* and add to the notes those that I have lately taken.

Case I.—W. K., æt. 7 years, born in Virginia, came under observation on June 14, 1875. His father is healthy and of good habits; his mother, though not suffering from any special disease, is thin and anæmic-looking. He has two sisters living, both of whom are remarkably healthy; a sister and a brother died in infancy, of diseases peculiar to that period.

His mother states that he presented no peculiarity, except a very large head, until he began to walk, at two years of age. He then seemed to tumble around more than is usual with children of that age; but no special attention was paid to this until two years later, when the awkwardness of movement was found to be increasing. About two years and a half ago an outward squint of the right eye was noted, and at a somewhat later period his face was observed to be drawn to the left during the execution of certain movements, as that of smiling. His mental faculties have always been sluggish, and he has frequently suffered from pain in the right side of the head and over the right brow. His mother had observed that some of his muscles had increased in size, but she is unable to fix any date for the commencement of the overgrowth.

Examination.—The patient's head is very large, measuring 23⅜ inches in circumference, but all of the sutures are closed. He presents a very anæmic appearance; his tongue is furred and his appetite is capricious. His urine is normal. There is slight divergence of the right eye, and when he smiles his face is somewhat drawn to the left. His intelligence is rather below the average, and his memory, particularly for recent events, is impaired. He occasionally suffers from pain over the right brow, but this is not a prominent symptom, and there is some tremor of the muscles of the right hand during voluntary movements. The lungs are healthy, but the cardiac impulse is forcible and the area of dulness is increased.

When the boy stands, his feet are placed far apart, and the spine is curved forwards in the lumbo-sacral region, making the lower part of the chest and the belly very prominent. The muscles of the lower extremities are all firm and well developed, but the glutei and gastrocnemii are decidedly overgrown. The muscles of the upper extremities are normal in size.

Measurements: right arm, middle, 7½ inches; left arm, 7½ inches; right fore-arm, middle, 6¼ inches; left fore-arm, 6 inches; right thigh, middle, 14⅞ inches; left thigh, 14⅝ inches; right calf, middle, 10½ inches; left calf, 10¾ inches.

In walking, he steps upon the front part of the feet, the heels being well raised from the ground. His body is turned from side to side with each step, and his movements are very unsteady, so much so that he can walk but a very short distance without falling.

The electrical condition of the muscles is but slightly changed, and the sensibility of the legs and other parts is normal. There is no mottling of the skin. The temperature of the surface, taken over the calves, is somewhat lower than that of the thighs and arms.

On ophthalmoscopic examination the outlines of the disks are found to be somewhat irregular. The disks are also abnormally red, and there seems to be a multiplication of fine vessels. The veins are large and the arteries relatively small.

Case II.—S. C., æt. 6, born in Trenton, N. J., was admitted into the Infirmary for Nervous Diseases on February 15, 1875.

Her father has been twice married, and by his first wife had one child, a boy, who was subject to convulsions from the age of four years until he died, at the age of fifteen; he was also "paralyzed and deformed" on the left side.

By the second wife, who is said to have been an epileptic, there were three children, two of

whom are in good health, and the third, the patient, was well until she was three years of age. At this time she had frequent crying-spells caused by pains in the limbs, and she soon began to show signs of weakness in the lower extremities by falling frequently and unaccountably while walking. The weakness of the limbs increased slowly but steadily, until finally it became impossible for her to walk without a good deal of assistance.

Examination.—The patient has light hair and gray eyes, and presents a heavy and unwieldy appearance. Her intelligence is of a very low order, and she is inclined to be fretful and troublesome. The lungs and heart are healthy. She stands with her feet placed far apart and with the knees bent slightly forwards. The shoulders are thrown back, and there is a marked anterior lumbo-sacral curvature.

All of the muscles of the extremities are conspicuously developed, but those of the lower are, for a child of the patient's age, enormously so, as will be seen from the following measurements: Circumference of right arm, middle, 7 inches; left arm, 6 inches; right fore-arm, 6½ inches; left fore-arm, 6⅜ inches; right thigh, middle, 11⅜ inches; left thigh, middle, 11⅜ inches; right calf, 9¼ inches; left calf, 9¼ inches; circumference of abdomen at umbilicus, 22 inches; height, 3 feet 8⅜ inches.

In walking she moves very slowly and awkwardly, swinging her body from side to side and putting her feet to the ground with a sort of pounding movement. When she is made to lie down she falls heavily upon her hands, then throws herself upon her knees, and finally rolls over. Her mode of rising is exceedingly characteristic of the disease. She first gets upon her hands and knees, then extends the legs, the feet being well separated and the heels raised, and, gradually moving each hand back until she is able to touch her feet, she grasps the ankles with a sudden jerk and climbs up her legs and thighs. In rising from a chair she turns her body around first, then slides down until her feet touch the floor, and climbs up the legs and thighs, as in getting up from the recumbent posture.

The skin is everywhere loose and pliable, and can be readily lifted from the muscles. There is general mottling of the extremities, but it is especially marked in the anterior part of the thighs. The following are some of the surface-temperatures: Right calf, 91½°; left calf, 90°; under right knee, 96°; under left knee, 96°; sole of right foot, 83¾°; sole of left foot, 83¼°.

There is constant tremor of the flexors of the legs and feet and of some of the muscles of the fore-arms. In regard to the electrical condition of the muscles, it may be said that they all respond to both the galvanic and faradic currents, but not so promptly as in health. This is especially true of the thigh-muscles, which require a strong current to move them. The electro-sensibility is unimpaired.

Case III.—R. P., æt. 8 years, was brought to Dr. Mitchell's clinic, at the Hospital for Deformities and for Nervous Diseases, September 12, 1871. The following are his notes:

"His father is a meagre, pallid man, who has had syphilitic disease, and is probably of doubtful habits as to stimulants. The mother appeared at my clinic last year, suffering with acute attacks of intermittent neuralgia in the right ear, and with such accompanying symptoms as led me to suspect the existence of an abscess deep in the temporal bone. Some time after, she was relieved by a gush of pus into the back of the mouth; but, several months later, the right parotid gland became enlarged, and she ultimately died at the Episcopal Hospital of cancer of this part and of the jaw. The family consisted of six children; one of these died of scarlet fever, and the rest are said to be healthy.

"The lad himself is of a ruddy complexion, and has brown hair and blue-gray eyes. He has never had convulsions or any other grave acute malady. His tongue is clean, his appetite fair, his bowels regular, and his digestion good. The chest and heart are healthy, and the urine normal. When stripped and examined, his posture and external appearance present some notable peculiarities. While standing, the shoulders are thrown back, the blades project, the belly is thrust forward, the feet four inches apart, and the spine curved forward in the dorso-lumbar region without lateral deviation. Above the waist there is, with one exception, nothing remarkable about the muscular developments, which are such as belong to a person of his age. Both deltoid muscles are unusually large and hard, and are certainly much more conspicuous than they should be. They alone, of all the muscles of the upper extremities, seem to have shared in the pathological change which has affected the lower limbs.

"Below the pelvic brim the muscles are seemingly developed enormously, so that the legs are those of an infant athlete surmounted by a body of ordinary dimensions. The whole of both legs, including the glutei, are enlarged and hard, and the feet are too broad and thick. The left foot is rather the larger,—a peculiarity which belongs to his father.

"Measurements and weight: weight, 45 pounds; height, 3 feet 9 inches; right biceps (arm), 6.5 inches; left biceps (arm), 6¾ inches; right fore-arm, 6¾ inches; left fore-arm, 6¾ inches; belly, girth at navel, 20.5 inches; right thigh, middle, 12⅜ inches; left thigh, middle, 13 inches; right calf, 9⅞ inches; left calf, 10⅜ inches.

"The lad has no other physical peculiarities save a remarkable mottling of the surface of all the extremities. It is much more noticeable in the legs than in the arms, and consists of spaces of pallid skin surrounded by quite regular circles of congestion, which affect an irregular polygonal shape. The

muscles attacked are very firm and not quite symmetrical. The skin can be readily lifted from the altered muscles, is thin and flexible, and not firmly attached to the thickened areolar tissue, as we usually find it to be in most old cases of infantile palsy.

"Temperature: left axilla, 97.5°; right axilla, 97°; perineum, 94.5°; right calf, 91.5°; left calf, 91°.

"Electrical conditions: The lowest primary induction current causes moderate contractions in the flexors, adductors, abductors, and extensors of the thigh, the posterior tibial group, and the gastrocnemius. An increase of power is required to stir the anterior tibial muscles. The dorsal erectors of the spine and the glutei respond to the lowest induced currents.

"Left limb: Eight cells of Stöhrer's portable thirty-cell battery cause slight movement in the abductors and adductors of the thigh when the currents are rapidly reversed, the motion being best with an upward current. Gastrocnemius, — no motion until twelve cells are used with reversion of currents. Anterior peroneal group, — fourteen cells cause no movement, except reflected movements in the thigh, with a downward current; eighteen cells act freely with a to-and-fro current, and at the same time occasion free motion in the calf.

"Right leg: Eight cells with to-and-fro currents move the thigh-muscles, except the quadriceps extensor, which requires ten cells. The anterior peroneal group is only moved freely by to-and-fro currents from eighteen cells; while twelve cells thus employed act readily on the gastrocnemius.

"Mechanical stimulus, as by a smart tap on the muscles, gives rise to much less than the usual movement.

"The motions of the lad are remarkably curious. He betrays the commencing changes in the deltoid by a slight difficulty and abruptness in lifting the arms directly outwards from the sides, but otherwise the actions of the upper limbs are normal.

"When walking, he rolls his trunk from side to side, and scarcely bends the knees at all; the feet being thrown out and falling flat, much as in the walk of an ataxic patient.

"When asked to lie down, he casts his weight on the hands, and then falls clumsily on his knees. In rising he gets on his knees first, then on his hands and feet, and, by degrees bringing the hands close to his feet, seizes with them his legs, and, so to speak, climbs with them up the legs and thighs, until, after oscillating for a moment, he straightens himself."

Re-examination, September 30, 1875.—Since he first came under observation, four years ago, the patient has been slowly but steadily getting worse. About three years ago the paralysis became generalized, and since this time he has been bedridden and perfectly helpless. For two years he was an inmate of the Children's Hospital. His father died two years ago, of supposed renal disease.

He is now thirteen years old, and his height is about what it should be for one of that age. His complexion is very pale and somewhat waxy. His tongue is clean, his appetite fair, and there is no trouble with the bowels or bladder. The lungs are healthy and the respirations normal. The cardiac impulse is somewhat forcible, but the area of dulness is not perceptibly increased, and the sounds are normal. The tongue and all of the facial muscles, but particularly the temporals, which stand out very prominently, are hypertrophied, giving him a peculiar expression. His speech is altered from the enlargement of the tongue, and he has some difficulty in taking food.

The muscles of the shoulders, arms, back, and chest are all extremely wasted, but the fore-arms are large and contrast strongly with the arms. The joints of the upper extremities are free, and there are no muscular contractions. The muscles of the lower extremities are all hypertrophied, the gastrocnemii exceedingly so. There is rigid flexion of the knees, and permanent equino-varus and clawing of the toes. The extensor muscles are soft and flabby, but the flexors are exceedingly tense.

Measurements: right arm, 6¾ inches; left arm, 6⅞ inches; right fore-arm, 7 inches; left fore-arm, 7⅜ inches; right thigh, 14½ inches; left thigh, 14⅛ inches; right calf, 11⅛ inches; left calf, 10¾ inches.

There is general cutaneous mottling. It is, however, most marked in the thighs and legs. The skin is still pliable, and can be readily lifted from the muscles.

Temperature: Right deltoid, 92°; left deltoid, 92½°; right thigh (inner side), 94⅛°; left thigh (inner side), 94⅛°; right calf, 90°; left calf, 90⅝°.

Electrical condition: All of the muscles contract under a strong faradic current, with the exception of the anterior tibial group on either side. The muscles of this group do not respond even to the strongest current. The right gastrocnemius responds less promptly than the left. What is true of the faradic current is also true of the galvanic, but there is some movement of the anterior tibial muscles when a current from thirty cells is applied. The electro-sensibility is unimpaired. The boy has no use whatever of his arms or legs; he has to be fed, and even moved from one part of the bed to the other. When lying upon his back he can, by a sort of wriggling motion, assume the sitting posture; but this is accomplished very slowly and with extreme difficulty.

Comparing the notes of the present examination with those taken by Dr. Mitchell in 1871, the following changes will be found to have occurred.

(1) The paralysis has become general.

(2) The muscular wasting, before confined to the deltoids, now involves the entire trunk and the shoulders, the arms remaining but slightly changed.

(3) The hypertrophic process has attacked the tongue, the muscles of the face and forearms, and has (making due allowance for increase by natural growth) advanced to a marked extent in the lower extremities.

(4) There is decided loss of faradic reaction in the muscles, which responded before almost normally, and entire abolishment in those formerly requiring a strong current to move them, viz., the anterior tibial group on either side.

(5) The surface-temperature of the muscles chiefly hypertrophied is still further depressed.

The first recorded case of the disease is that of Dr. Edward Meryon (Medico-Chirurgical Transactions, vol. xxxv., 1852); but a clear description of its clinical history, entitling it to a separate place among diseases, was first given by Dr. Duchenne, in 1861, in his work on electricity. In 1866 a more accurate description, accompanied by an analysis of thirteen cases, was published by him in the *Archives Générales de Médecine.*

Since then, numerous cases, probably one hundred in all, have been reported both in this country and abroad. An analysis of most of these is contained in an exceedingly interesting paper by Dr. C. T. Poore, in the *N. Y. Medical Journal* for June, 1875.

The names which have been given to the disease have of course varied with the changing views of its pathology. For instance, by Duchenne it was first called "paraplégie hypertrophique de l'enfance de causes cérébrales;" but he afterwards adopted the name "paralysie musculaire hypertrophique," the best probably ever suggested, since it does not involve the pathology of the disease, which is still an open question. Other names are "sclérose musculaire progressive" (Jaccoud), "lipomatosis luxurians musculorum progressiva" (Heller), etc.

The disorder is essentially one of childhood and of males, the number of adults and of females among the recorded cases being exceedingly small. Thus, in eighty-five cases analyzed by Dr. Poore, it was found that in thirty-eight the disease first manifested itself before the age of five years, in twenty-six between the fifth and tenth year, in six between the tenth and sixteenth year, and in only six after that age. Out of the eighty-five cases, seventy-three were males and only eleven females, the sex in one not having been mentioned.

The cause of the affection is not yet fully understood, but it has been supposed, like many diseases belonging to the same category, to be dependent upon some disturbance of the sympathetic system. There can be no question, however, that hereditation frequently plays an important part in its causation. Dr. Friedrich, of Heidelberg, in his monograph on true and false muscular atrophy, states that, out of eighty-one cases examined by him in regard to this point, there were in thirty-five instances two or more belonging to the same family. In one instance there were five of one family affected, and in another four. From the time of the publication of Duchenne's work and up to the date of the appearance of Dr. Friedrich's monograph, in 1873, the disease was regarded as a distinct one. Friedrich, however, holds that pseudo-hypertrophic paralysis is essentially the same as progressive muscular atrophy, their apparent dissimilarity being dependent upon the modifying influence of age and a special tendency in the former to an excessive development of fat and areolar tissue.

There have been but few autopsies recorded in which reliable examinations of the nervous centres have been made, and the results of these have been various, some observers having found decided lesions in the spinal cord, and others having reported negative conditions. Among the former may be mentioned Barth (*Archiv der Heilkunde*, Leipsic, 1873), Müller (*Beiträge zur Pathol. Anat. des Mensch. Rückenmarks*, Leipsic, 1871), Kestevan (*Journal of Mental Science*, 1870–71), Lockhart Clarke (*Med.-Chir. Trans.*, 1874); and among the latter, Cohnheim (*Canstatt. Jahrb.*, 1866) and Charcot (*Arch. de Physiologie*, 1872). The general belief, however, is that the disease is one affecting the muscles primarily, while any change in the nervous centres must be regarded as secondary.

The disease is usually divided into three stages. (1) That of general feebleness of the lower extremities and of the extensor muscles of the back, as shown by a peculiar side-to-side waddling gait and lumbo-sacral curvature. (2) Apparent hypertrophy of the muscles of the lower extremities. (3)

Generalization of the paralysis, the patient becoming bedridden and helpless.

There are seldom any prodromic symptoms. In a few of the recorded cases, however, there have been at the onset pains in the limbs, or convulsions. The first symptom usually recognized is the child's disposition to tumble about without apparent cause. Its gait is also different from that of other children, being a peculiar side-to-side waddle, as if it were trying to balance itself, and in standing or walking the feet are placed far apart, and the spine, from loss of power in the extensor muscles, is curved forward in the lumbo-sacral region. If the disorder begins in infancy, the loss of power is apt to be overlooked until the time for walking arrives. The muscles in this stage are found to be firm and well developed.

In the second stage, the lumbo-spinal muscles and certain of the muscles of the lower extremities, particularly the glutei and gastrocnemii, are hypertrophied and stand out prominently. The lordosis is more marked, and in walking the heels are drawn up and the feet pointed. The awkwardness of movement and unsteady gait have now so far increased as to make it impossible for the child to walk more than a few feet without falling.

In the third stage, the paralysis has become general from involvement of the muscles of the upper extremities and occasionally of the face. The talipes equinus has now, from inversion of the feet, become converted into talipes equino-varus. Some of the muscles are wasted, others are hypertrophied. The patient finally falls into a low condition, and dies either from exhaustion or from some intercurrent disease.

A glance at the notes of the cases reported in the present paper will show that the first two belong to the second, and the third to the last stage of the disorder. That is, in the former, the prominent features are hypertrophy of certain muscles, with loss of power, confined chiefly to the lower extremities; and in the latter, muscular hypertrophy with general paralysis. In the first case there is a combination of head-troubles with hypertrophic palsy. The former, judging from the appearance of the eye-ground, the presence of pain in the head, and the loss of power in certain of the cranial nerves, probably originated in some inflammatory trouble at the base of the brain. There could hardly have been, however, any connection between the two sets of symptoms. Another point to attract attention is the hypertrophy of the heart, which, in the absence of a history of its usual causes, must be ascribed to changes in the walls of the organ similar to those occurring in the muscles elsewhere. I was not aware, when I first examined the patient, of any mention having been made of this lesion in connection with the disease; but I afterwards found, on looking over Dr. Poore's analysis, that four cases had been recorded. In one of these, reported by Dr. B. W. Foster, the heart was normal when first examined, but three years later, and without apparent cause, it was found to be enlarged. It is quite possible that other cases may have been overlooked.

The second case, besides being a well-marked example of the disorder in its second stage, is, as already stated, still further interesting on account of the sex of the patient. Another point of interest is the presence of pain in the limbs at the commencement of the disease.

The most striking feature of the third case is the hypertrophy of the tongue and of the muscles of the face.

In two of the cases there was well-marked cutaneous mottling. This not uncommon symptom has been variously accounted for, but the only plausible explanation is that suggested by Friedrich, who ascribes it to interference of the circulation in the skin from obliteration of the veins of the hypertrophied muscles.

The surface-temperature of the muscles chiefly hypertrophied was, in the three cases, somewhat lower than that of other parts; and in all three cases there was more or less loss of electrical reaction in the affected muscles.

The diagnosis of the disease is readily made. The physiognomy is so strongly marked that any one who is at all familiar with the symptoms could hardly go astray.

The prognosis is always unfavorable. Duchenne, however, holds that the disease may be arrested if seen in its incipiency.

The treatment should consist in the administration of iron, phosphorus, and cod-liver oil. The muscular and cutaneous circulation should be stimulated by manipulation (massage) and by faradism or galvanism, the choice of either being determined by the response of the muscles.

CARBUNCLE TREATED SUCCESSFULLY BY CONCENTRIC PRESSURE.

Read before the Rush Medical Association,

BY G. WINFIELD ZEIGLER, M.D.,

Resident Physician at the Episcopal Hospital.

S. E., æt. 40, salesman, was admitted into the surgical ward of the Episcopal Hospital, July 12, 1875, suffering from an extensive carbuncle on the nape of the neck, of two weeks' standing, measuring at the time of admission *nine and a half inches in length and four and three-fourths inches in width.*

His general condition was good, and he stated that he had always had very good health until within about four years, when he was affected with inflammation and enlargement of some of the lymphatics of the neck: one of them going on to suppuration and discharge.

This local trouble soon subsided, and from that time until about four months before the manifestation of the carbuncle he felt quite well. At this time the posterior part of his scalp and neck became very irritable, and when rubbed would bleed. This condition gradually grew worse until fifteen days before admission, when he discovered three small pimples on his neck, about equally distant from each other, which grew rapidly, and were very painful. On the sixth day following this outbreak, the largest and middle one ruptured, discharging an unhealthy, thick fluid, which irritated the sound skin over which it flowed.

Three days later, the other two followed the same course. On admission, there were numerous points of suppuration over the part, discharging quite freely, and rapidly tending towards the formation of sloughs.

The main opening over the middle of the carbuncle was over three inches in length, while the smaller ones immediately surrounding were about one-eighth as large.

The treatment, which was directed by my esteemed chief, Dr. John Ashhurst, Jr., consisted in the use of adhesive strips, about three-fourths of an inch in width, so applied as to make concentric pressure upon the part, and leaving a space over the centre, corresponding to the size of the main opening, free, over which was applied a linseed-meal poultice, supported by a roller.

The internal treatment consisted in quiniæ sulph., gr. ii, and ferrum redact., gr. i, given four times daily, with two bottles of ale, and a well-regulated house diet.

On the second day the tumor measured nine inches in length by three and three-fourths inches in width, thus showing the immediate effect of the strapping. The same dressing was renewed every morning until the eighth day (20th), when two large sloughs were removed.

On this occasion the poulticing was discontinued, and the part dressed with cerat. resin. comp. On July 22 another large slough was removed, and on the 24th several smaller ones, leaving then a large ulcer, with a healthy granulating surface, and a superficial opening about four inches in length and three inches in width, around which were some smaller openings.

The same treatment was continued, and on the 3d of August the part was again measured, showing the main ulcer to be only two and three-fourths inches in length and one inch in width, while the smaller ones surrounding had nearly granulated over.

On the 16th the main ulcer had decreased to one and three-fourths inches in length and three-fourths of an inch in width; all the other ones having closed except one, back of the left ear.

On the 17th the patient, at his own request, became a dispensary patient of the hospital. I did not see him again until the 13th of September following, when there remained nothing but a cicatrix four and a half inches long and half an inch in width at its widest part. The patient told me that it had entirely healed a week previous.

He did not have an unfavorable symptom during his stay in the house.

My colleague, Dr. William H. Hawkes, has kindly consented to give me his notes of the following case, which came under his care in the hospital, and in which the same treatment was successfully employed by direction of his chief, Dr. John Ashhurst, Jr.:

Bridget T., æt. 45, domestic, when admitted to the hospital, September 6, 1875, had a large carbuncle on the back of the neck, with an opening which measured four inches in length and one inch in width, and which was filled with greenish-yellow sloughs. Patient first noticed that the skin at the back of the neck was so irritable that she could not resist scratching it. This irritability increased until about seventeen days before admission to the hospital, when a small pustule gathered and discharged. The discharging surface rapidly increased, in consequence of sloughing of the skin and subcutaneous tissue, until the carbuncle attained the size mentioned above. On admission, the patient's general condition was somewhat impaired, and she was accordingly put on tonic treatment. As local treatment, adhesive straps were applied to the parts about the carbuncle in such a way as to produce concentric pressure, and flaxseed poultices were used until the sloughs separated. Then a dressing of cerat. resinæ was substituted, the straps being continued. The resulting ulcer rapidly filled with granulations, and the skin about closed in over them. Patient was discharged on the 28th of September, twenty-two days after admission,

with the carbuncle healed. The cicatrix measured two and a fourth inches in length and about two or three lines in width; a portion of the cicatrix showing only as a fine line.

In addition to the cases already described, both Dr. Hawkes and myself had each another case of the same kind.

Though the carbuncles, which in the one case was located on the nape of the neck, and in the other upon the back, were not so extensive as in the first two cases, yet the same treatment was successfully adopted in both.

The conclusion which is drawn from this plan of treatment is, that there results little or no loss of integument, thus greatly diminishing the size of the cicatrix which is found when incisions or the free use of caustics are resorted to.

In all four cases, especially in the first two, there was extensive sloughing of the subcutaneous tissues, but the granulations which sprang up rapidly filled this cavity, very little deficiency was left, and the whole was nearly covered with a roof of well-preserved skin, which under any other form of treatment would surely, I think, have been sacrificed.

The reader of this article desirous of following the subject further is referred to cases reported in *The American Journal of the Medical Sciences* for 1869, on page 115, by Dr. John Ashhurst, Jr., and on page 282, by Dr. S. R. Knight.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

SERVICE OF PROF. LOUIS A. DUHRING.

Reported by ARTHUR VAN HARLINGEN, M.D.

LUPUS VULGARIS.—TREATMENT OF ECZEMA RUBRUM.

THE patient, a large, healthy-looking Scotchwoman, 45 years of age, seeks relief for an affection of the nose, evidently deep-seated and of long standing. The integument covering the diseased organ has lost almost entirely its normal appearance. Over the bridge and about the ala the skin is thin, shining, tense, and cicatricial. On the left side where the ala merges into the tissues of the cheek its surface is covered with brownish-yellow crusts and scales. On the right, minute yellowish tubercles, foci, or points of deposit, may be observed under the skin. On detaching the crusts, which are quite adherent, various shallow ulcers may be observed underneath. The orifices of the nares are much contracted, and the cicatricial tissue seems to extend into the border of the mucous membrane and even beyond. Those portions of the skin in which the disease is still active have a bright coppery tint. Where the active process has expended itself, the skin remains pearly-white and has a shining and cicatricial look.

The history of the case shows the disease to have made its appearance some twenty-seven years ago, in the form of a small "pimple" upon the nose, and to have made steady though extremely slow progress ever since, in spite of the most varied medication. Until recently there has never been any discharge from the nostrils; no bone has ever come away; she has never had sore throat or eye-trouble of any kind; nor has she ever had pains in the head or in the bones, swelling of the joints, or eruption of any sort upon the skin other than the present.

In commenting upon the history of this case, Dr. Duhring remarked that the questions which had brought it out were directed with the object of establishing or excluding the existence of syphilis. It would appear, from the account of her symptoms by the patient, that she had never suffered from any lesions pointing to syphilis. The nativity of the patient is of some importance, since certain diseases are much more common in one country than in another. Lupus, for such is the disease, is more common among persons born in Great Britain than among Americans. In the present case the diagnosis need not depend at all upon the history, since the appearances, in spite of the disguising effect of caustic applications, are characteristic. These yellowish foci of deposit and this shallow ulceration are pathognomonic of lupus vulgaris.

The prognosis of a case like the present must be guarded; the patient must be given to understand that it may be months before it gets well, or perhaps even perceptibly improves. For some reason or other, said Dr. Duhring, lupus, as it occurs in this country, seems much more amenable to treatment than is the case abroad.

The treatment of lupus may be either internal or external. The latter method

has had such a thorough trial in this instance that more perhaps is to be hoped for from internal medication. The patient was ordered five grains of iodide of potassium, which Dr. Duhring said would have to be continued months before very much amelioration could be hoped for.

A woman having an eczema rubrum of the leg was next shown to the class. The appearances were as usual; a large patch of reddened, infiltrated skin, extending from the ankle to the knee, and nearly encircling the leg. The surface was dark and glossy, showing in some places numerous small red points, moist and bleeding, in others, a squamous condition. The symptoms were intense burning and itching, with a feeling of weight in the limb. The history showed the affection to be closely connected with the existence of varicose veins.

Dr. Duhring remarked that eczema varies very greatly, as it occurs in one part or another of the body, and even in the same part from day to day. The case before the class had been, when seen a few days previously, a case of pure eczema rubrum, but was now, in part at least, eczema squamosum. The treatment would have to be somewhat guarded, as a dispensary patient could not be kept under control in the manner of a hospital patient. The use of the following ointment was directed:

℞ Hydrarg. chlor. mit., ʒi;
Unguent. zinci oxid., ʒii.—M.

The leg is to be carefully cleansed with hot water and brown soap, morning and evening, and the ointment applied, spread upon soft rags. As the patient suffers from constipation, she will take, at the same time, some simple aperient mixture.

[The patient, under this treatment, made a rapid recovery, and reported in a few weeks nearly well.—REP.]

TRANSLATIONS.

COMPLETE LUXATION OF THE RIGHT SIDE OF THE PELVIS (Dupont: *Centralblatt für Chirurgie*, No. 37, 1875; from *Archives Médicales Belges*, 1875).—The subject of this injury was a pioneer, who during the manœuvres on the Scheldt was injured by being caught between two pontoons, fell unconscious, and was taken to the hospital, where three hours later he died.

No external injury could be seen on examination of the body, but at the post-mortem examination an extensive effusion of blood into the right iliac fossa was found. Further examination showed that the symphysis pubis was ruptured and that the right innominate bone was thrust backward, so that the entire right side of the pelvis, together with the leg of the same side, appeared to be luxated outwardly. No fracture of bones or injury of the soft parts covering them could be discovered. W. A.

DIFFERENTIAL DIAGNOSIS OF CONCUSSION AND COMPRESSION OF THE BRAIN BY MEANS OF THE OPHTHALMOSCOPE (Bouchut: *Centralblatt für Chirurgie*, No. 37, 1875; from *Comptes-Rendus*, 1875).—During the past ten years Bouchut has made careful examinations as to the ophthalmoscopic appearances in cases of concussion and compression of the brain, and thinks himself justified in announcing his results.

In cases of concussion the optic nerve preserves its normal form, clearness, and color, and the retina, as well as the veins which pass through it, presents no noticeable alterations. When compression exists, as well when inflammation ensues as when it does not, or when there is a serous or bloody exudation into the brain, with or without fracture of the skull, the optic nerve appears swollen, flattened out, and of a pink hue. It is sometimes also more vascular, its contour less distinct, and in it is a diffuse or circumscribed effusion, which spreads itself into the neighboring portions of the retina. If the exudation involves the sheath of the nerve, the retinal arteries sometimes appear to be contracted. The veins of the retina, which are more or less distended, show by the retarded circulation of their contents that a similar retardation of the circulation of the blood in the vessels within the skull exists. W. A.

APPARENT HERMAPHRODITISM (Dr. Schoeneberg: *Berliner Klinische Wochenschrift*, No. 27, 1875).—In June, 1870, Dr. Schoeneberg was called to see the sixteen-year-old daughter of a painter, who was thought to be suffering from a hernia, since while lifting a heavy object she had been attacked with sharp pains in the right inguinal region. Upon examination, a round movable tumor about the size of a hazel-nut, which was painful on pressure, was found in the right labium. No evidences of hernia were found, and upon a more extended examination the tumor men-

tioned above was found to be a testicle, and the supposed girl a man.

The individual was of middle size; the pelvis, thorax, etc., of the male type.

The genitals upon superficial examination looked like those of a woman, and were covered with long hair. On the right side the testicle could be distinctly felt, and was movable; on the left the corresponding organ was smaller, less movable, and fixed in the end of the inguinal canal. When the "labia" were pulled apart, the penis, five or six centimetres in length, could be seen.

The glans was impervious, the orifice of the urethra being posterior to it; and still farther posteriorly lay the orifice of the vagina, partially closed by a rudimentary hymen. The vagina admitted the finger to the distance of five centimetres, but no uterus could be discovered, and there had never been any signs of menstruation.

The doctor at once stated the sex of his patient; but the parents had no desire to have their supposed daughter transformed into a son. Five years later the individual again presented himself to the doctor, and desired to have his true sex legally established, since his voice, beard, and other evidences of his sex were becoming more marked. An official examination was made, and the legal certificate given that the individual was of the male sex.

He admitted in response to inquiries that he had experienced sexual excitement towards women, and that seminal emissions sometimes occurred. W. A.

A Case of Elephantiasis Græcorum (*Wiener Med. Presse*, No. 33, 1875).—M. L., a Servian, aged 20, presented on his admission into the wards of Prof. Hebra the following symptoms:

The skin of the face was of a dark color, owing to the deposition of pigment, and on the glabella and over the supraorbital arches of both sides were tubercles of a similar hue. The eyelashes were almost entirely wanting, there being but a few remaining at the internal angles; the eyelids were thickened, and in them could be seen distended vessels. The bridge of the nose was depressed at the juncture of the bony and cartilaginous portions, and on the right ala were sharply-defined tubercles of a dirty yellowish-brown color. On the skin of both cheeks and of the chin were infiltrations, partly confluent, partly discrete, of the same character. The cutaneous surface of the arm, while to the eye it presented nothing abnormal, gave to the finger a sensation of increased thickness and lessened elasticity. Sensation on the arm was diminished, even where the skin was normal in appearance, and on the forearm and hands there was complete loss of sensibility. Similar tubercles and pigmented patches of skin were seen upon the trunk and lower extremities, and there were some points of ulceration on the uvula and palate.

The papillæ on the upper surface of the tongue, and more especially those of the circumvallate variety, were greatly developed, pigmented more than usual, and were thickly covered with necrosed epithelium. Examination with the laryngoscope showed that the epiglottis, like the swollen arytenoid cartilages and laryngeal walls, was covered with whitish epithelium. Both true vocal cords were thickened to a marked degree, and gave signs of slight desquamation. The movement of the cords was, however, normal; but the width of the fissure of the glottis, even with forced inspiration, was less than it should have been.

The patient stated that both his father and uncle had suffered from the same disease, but that his mother had been healthy.

There had been no prodromata to the attack, which began with ulceration of the knees and elbows.

During nine months the patient had repeated attacks of facial erysipelas attended with the formation of abscesses and attacks of suffocation, due to the involvement of the structures of the larynx. From time to time bullæ made their appearance, which burst and left ulcerated surfaces, upon which crusts formed. On the conjunctiva and on both lower extremities hemorrhages sometimes occurred, and the patient suffered much from neuralgic attacks along the course of the brachial, sciatic, and other nerves.

In the early part of September, 1873, symptoms of inflammatory disease of the trachea and lungs came on, and death finally occurred.

At the post-mortem examination no change of consequence was noticed in any of the internal organs, with the exception of gray hepatization of a portion of the right lung. The nerves and the walls of

the veins, and more especially those of the superficial vessels of the upper and lower extremities, were from three to four times their usual thickness, and the disease of the mucous membrane of the trachea extended downwards as far as the fourteenth cartilage of that tube. W. A.

TEST FOR BILIARY COLORING-MATTER.—E. Fluschl (*Centralblatt für Med. Wissen.*, No. 34, 1875) recommends mixing the fluid to be examined with a concentrated solution of nitrate of sodium, and then allowing a small quantity of sulphuric acid to flow down the inside of the test-glass and settle at the bottom. At the places of contact between the acid and the lighter fluids the characteristic play of colors shows itself, and remains visible for some time. The advantage of the sodic nitrate over the potash salt is in its bringing the reaction out more slowly and with less violent effect. X.

HÆMATEMESIS IN NEW-BORN CHILDREN.—Kurster (*Deutsche Zeitschrift für Prakt. Med.*, 1875, iv. p. 20) reports the history of an infant of six months, who while in apparently good health, and without premonition, vomited at various times considerable quantities of blood. The third day blood came by the mouth and intestines. The infant continuing to enjoy good health, careful search was made in order to ascertain the origin of the sanguineous discharge. It was finally ascertained that the left mamma of the child's nurse showed a painful and indurated red point. When the child nursed at the other breast only, no vomiting of blood took place. The conclusion attained was, therefore, that the blood ejected by the child had been taken with the milk. X.

CONNECTION BETWEEN VITILIGO AND EXOPHTHALMIC GOITRE.—Dr. Raynaud calls attention (*Gaz. Méd. de Paris*, p. 399, 1875) to the concomitance or at least coincidence of these two affections, which are not generally supposed to have any pathological connection. In view of the symmetry of the cutaneous discolorations of vitiligo, it is difficult, according to Hutchinson, not to suppose the previous existence of a general condition. Other observers have sought the order of causality in a number of cases of acquired vitiligo. Perhaps, says Dr. R., the problem might be reversed, and the primitive affections accompanied by the pigmentation might be studied. With this view, Dr. R. has published a brochure in which he gives notes of a number of cases of Basedow's disease in which pigmentation of the skin occurred. While placing the facts on record, Dr. R. does not attempt to find any explanation for them. X.

THE IMMUNITY OF THE TORPEDO AGAINST ITS OWN SHOCK (J. Steiner: *Centralblatt für Med. Wissenschaften*, No. 37, 1875; from *Reichert's and Dubois-Reymond's Archiv*, 1874).—Steiner has been investigating the immunity of the torpedo against its own shock in the laboratory of the zoological station at Naples.

He found that animals of large size gave a stronger shock, and he first determined the relation between the weight of the animal and that of its special organ as being 4 to 1. He concluded from this that the intensity of the shock in the body of the animal itself must be wellnigh independent of the size of the animal. If torpedos of small size are taken from the water their shock can be distinctly felt, but in experimenting with large animals nothing is felt unless the hand is placed directly on the organ concerned in producing the shock.

If a frog, however, is placed upon the tail of a torpedo, it trembles at every shock, and if a small torpedo is placed upon the posterior portion of a large animal of the same kind, similar phenomena are seen.

When the animals were quite fresh, their own muscles were seen to twitch with each shock; and Steiner concludes by denying the existence of the immunity which has been previously claimed for this animal.

W. A.

THE ACTION OF CONSTANT CURRENTS ON MUSCLES DEPRIVED OF THEIR NERVES (E. Brücke: *Centralblatt für Med. Wissenschaften*, No. 37, 1875; from *Wiener Acad. Sitzungsber.*).—In opposition to the views of Engelmann (*Centralblatt*, 1870, 471), Brücke finds that powerful currents cause muscular contractions even when the electrodes are not directly applied to the muscles, but when the current is conducted through other muscular masses. When the sartorius was divided in the middle by pinching while the electrodes were applied to the bone which was in connection with the muscle, contractions were caused. Nervous action in these experiments was paralyzed by the free use of woorara. W. A.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, OCTOBER 16, 1875.

EDITORIAL.

THE PENNSYLVANIA MEDICAL ACT.

IN our last issue we published an article calling attention to the defects in the Pennsylvania Medical Act, and urging the Committee of the State Society to make every effort to have them rectified. When this act was first proposed we did not feel called upon to support it, because it seemed to us a half-way measure, founded upon the absurdly false idea that he who possesses a medical diploma must be fitted by education for the practice of medicine. As there is some probability of the subject being brought up again before our State Society, we would respectfully suggest that what is wanted is protection of the people from incompetent, uneducated physicians, and that it makes little practical difference whether the incompetent has obtained a diploma and is known as a "regular," or, holding no diploma, is called a "quack." The sooner the profession acknowledges, what it knows to be true, that no diploma of any American college, except it be that of Harvard, is a guarantee that its possessor is sufficiently educated to practise intelligently, the sooner will the profession be put upon a firm basis for public support and honor.

We do not see any need for argument at present; it seems to us already abundantly shown that in State examining boards is to be found the only radical cure of existing evils; but we do desire to urge action. We most earnestly hope that our State Society will at its next meeting appoint from among those of its members not connected with medical teaching an energetic and cautious committee, to consider the matter in all its aspects, and prepare a plan of action.

The chief difficulty in the way arises from the existence of homœopathy, eclecticism, and various other narrow sectarian forms of medical practice, with which the regular profession can have no union. This difficulty is not, however, insuperable. In the Canadian province of Ontario it has been met in a manner which, although no doubt distasteful to most physicians, in practice has worked well. Under its action the regular physician is forced to sit at the same board with the homœopath and the eclectic, but at the same time it appears as though these narrow empiricisms were being driven from the province. The law recognizes the homœopath, but forces him to be educated in the fundamental sciences of medicine; and it appears to be next to impossible for an intelligent man to be well educated in medical science and at the same time believe in homœopathy. During the first five years of the working of the act, up to 1874, there had not been a single student who desired to register as a homœopath, although during the year preceding the formation of the joint board the separate homœopathic board which then existed passed sixteen, and the eclectic board thirty-three candidates. To achieve such a result as this, would it not be worth while to sink a little of professional dignity?

In the Ontario Act the whole medical profession, regular and irregular, was formed into the college of physicians and surgeons of Ontario, and the supreme power was vested in a medical council, which was directed to be formed of representatives of certain specified teaching institutions (one each) and of twenty members from the college at large, five elected by the homœopaths, five by the eclectics, and twelve by the regular profession. It was also provided that this council should appoint a board of examiners, to be composed of one member for every chartered college of medicine in Ontario

and nine members to be chosen from those not engaged in teaching. No one was allowed to practise without registration, and for this an examination by the board just spoken of was required ; it being distinctly ordered that any candidate signifying his wish to be registered as a homœopath or an eclectic practitioner should be examined on the materia medica, practice of medicine, surgery, and obstetrics only by examiners approved by the representatives in the council of the body to which he had signified his desire to belong.

It is hardly probable that an act presenting features such as those just enumerated would be originated by our State Society, although in Michigan the State Society has requested from the Legislature the passage of a similar enactment. It is possible that both regular and irregular would be satisfied by having an examining board which should avoid all questions concerning materia medica and the treatment of disease. The man who possesses a good knowledge of anatomy, chemistry, physiology, pathology, the natural history and diagnosis of disease, may be trusted for therapeutics. Or, if it were thought more desirable, after a certificate of excellence had been given by a board examining only upon such branches as are common to all, other boards representing the various methods of practice might examine upon therapeutics and give the final right of registration.

It is very probable that better plans than either of these might be discovered if the effort were made. What is wanted now is an earnest inauguration of effort. A committee in which the best conservative and best progressive elements of the profession were represented could certainly arrive at some positive result. Let the trial at least be made, and then the skirts of the regular profession will be clear.

We learn from private sources that Duchenne, the famous medical electrician, is dead.

POISONING BY LABURNUM ROOT.

THE laburnum-tree (*Cytisus Laburnum*) of Europe has long been known by the people to be actively poisonous, and in 1864 Husemann and Marmé discovered in it a poisonous alkaloid, cytisin. The exact properties of this have not been determined, but a recent wholesale poisoning in Forest Gate School, England, will probably draw a good deal of attention to it. The radices resemble somewhat stick-liquorice, and fifty-eight boys, probably mistaking the roots of an old laburnum-tree for their favorite sweet, ate freely of them. In a short time they were affected with symptoms of narcotic poisoning, varying in severity from simple sleepiness to complete stupor. There was no complaint of pain, or burning of mouth, throat, or stomach, nor was there any sickness until emetics were given. When they arrived at the Infirmary they were pale, cold, and staggered about; their pupils were somewhat dilated. The sleepiness is said to have been intense, the boys falling to sleep even while in the act of vomiting, some with the basins in their hands, others standing at the sink. Two boys who were much worse than the rest, after freely vomiting, were insensible, and showed very strange waving motions of the arms to and fro, whilst now and then their legs, first one and then the other, were convulsively drawn up ; in one of them there was slight frothing at the mouth. Their pupils, as well as those of several less seriously affected, were unequally dilated. These two boys were strong and robust, and thirteen years old, and, so far as could be made out by subsequent inquiries, could not have chewed more than half an ounce of the root. Ten hours after taking the poison they went to sleep whilst being walked about the yard, after having had cold douches, strong coffee, etc.

All the cases speedily recovered, and on the next day showed hardly any traces of injury. As intense drowsiness ending in

stupor was the most prominent symptom in these cases, it is possible that cytisin, on investigation, might prove to be a valuable hypnotic.

We have received a long letter from a gentleman whom we suppose to be a medical student, complaining, very justly, of preceptors for their non-attendance to their duties. The preceptor in the present stage of medical education, in most cases, is necessarily of little or no value to the student. It is absurd to suppose that a medical man having any business whatever can afford for the paltry pittance of one hundred dollars a year to give an hour or even half an hour a day to a student. Preceptorship, along with the rest of the American system of medical education, is a solecism, a barbarism, a remnant of the time when the doctor's pupil was his cupper, leecher, drug-clerk, and even office-boy, wig-dresser, and hair-cutter. The best development of the present is to be found in the "quiz associations" which abound in our city. Some, if not all, of these do give the student very full return for his money. They can afford to do it, because they have large classes, and to teach a dozen men requires no more time than to teach one or two. We do not publish the letter of Mr. ——, because of its length, but we have long been of the opinion which he urges, that preceptors often do not act justly towards those who apply to them. If they cannot attend to students they should decline to take them, and send the often ignorant—*i.e.*, verdant—young man to those who will give him a *quid pro quo*.

The London *Lancet* suggests that the occasional cases of sudden sinking of good swimmers are due to cramp of the diaphragm and muscles of respiration.

Dr. Hooker, of Kew Garden, reports that the results of ipecacuanha cultivation in the British Colonies have not been encouraging, but recommends further trials.

CORRESPONDENCE.

PRACTICAL HYGIENE IN MEDICAL COLLEGES.

To the Editor of the Phila. Medical Times:

Dear Sir,—It has been said that a shoemaker always wears the poorest shoes and a tailor the most ill-fitting clothes. It is on this principle, I suppose, that in the construction of our medical colleges, in which hygiene is taught by precept, we find its practice is almost entirely disregarded.

On Monday evening, in the innocence of my heart, I attended Prof. Gross's introductory. The lecture-room, evidently designed, so far as ventilation is concerned, for not more than one hundred persons, was occupied by six hundred, and, unable to get out, there I had to sit and sweat, drinking in gallons of carbonic acid gas and more noxious vapor. During the regular term matters are not much better; hour after hour, for five months, the student at the Jefferson College is forced to breathe an atmosphere vitiated by the breaths and exhalations from four or five hundred students, until at last the brilliant ruddy complexion brought with him from the country is changed into a decided pallor, erroneously supposed by outsiders to be due to that of which the average medical student is rarely guilty,—hard study.

In the new building of the University, though the ventilation is by no means perfect, the seats are the chief abomination. These, of the straight, high-backed style used in our churches a century ago, when butternut was the fashionable cathartic, are well calculated to entice the student from the path of virtue. They act morally, ruining his temper, and physically, by their hardness, on his gluteal region. It seems strange, and almost culpable, that such an important matter as this has been overlooked, more especially when a remedy is so easily obtained. "Ye powers that be" should have benefited by the experience of our theatres, and have supplied our colleges with an iron-frame, leather-cushioned seat, with a sort of rest at the right hand, on which the book could be laid and notes of the lectures taken with ease and pleasure.

Probably the best method of starting the reform would be to condemn the deans of the respective faculties to sit on these health-giving benches during an hour or two of a poor lecture.

Often, while listening to the teacher of hygiene, when imbibing vast quantities of CO_2, squirming around to find out the softest side of pine and oak board, with cold feet from a draught near the floor, have I been reminded of that professor of mnemonics who, after his lecture, went off forgetting his umbrella.

Give us, therefore, the iron-frame seats, so

that the carving propensity of the medical student may be reformed; give us air that we may breathe, so that when the well-trained laugh goes round at the jokes grown old and gray in service, the pleasure may not be alloyed by the thought that thereby more poison is being added to the atmosphere.

A LONG-SUFFERING STUDENT.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, SEPTEMBER 9, 1875.

The PRESIDENT, DR. WM. PEPPER, in the chair.

Soft cancer of the pancreas, by Dr. MICHAEL O'HARA.

MRS. H., during her life, was a remarkably strong woman until eight years ago, when she suffered for two years from rheumatism. She has had seven children, six of whom are living. For the past three years her health has been failing, as shown by headache, dizziness, sour stomach, tympanitis, and habitual costiveness. But there seemed nothing serious until February, 1875, when she slipped on the ice and hurt her back. She thenceforward complained of pain in her back and left side. To these were added, in March last, loss of appetite and great difficulty in passing her water. She had felt a lump in the abdomen since the middle of March, and it soon began to be very painful. She could neither sleep nor eat. I was called to her in May, and found a tumor in the lower abdominal region and extending upwards. The diagnosis was cancer of the mesenteric glands. The tumor was large and pear-shaped. In the latter part of May she vomited everything, but morphia and bismuth relieved her somewhat. Injections relieved the costiveness; there was no movement of the bowels without them. The difficult urination continued. She continued wasting, the tumor enlarging until it was three inches above the umbilicus at the time of her death, which was caused by exhaustion and shock from diarrhœa and peritonitis.

She died August 17, 44 years of age.

The post-mortem examination, conducted by Dr. Willard, revealed the form of cancer of pancreas which we present to you. The tumor was unusually large, brain-like, cystic in its central portion, and adherent to all the adjacent viscera.

Dr. WM. PEPPER remarked that the case was one of more than usual difficulty of diagnosis, although cancer of the pancreas is well known to be one of the most difficult to determine. The difficulties were perhaps here increased by the locality of the tumor, its size, and adhesion to the spinal column. Jaundice, which is often present, was here wanting. Pain in the back, which is very constant, was here present, but this is noted in so many other conditions as to have no diagnostic value.

Dr. HARRISON ALLEN related the history of a parallel case, that of M., aged 62, single, with hereditary tendency to cancer; was out of health (anæmia with constipation) for a year previous to the appearance of a tumor below the line of the false ribs to the left of the median line. It grew rapidly downward to the left, and was at first supposed to be a splenic tumor. The mass when first seen was sub-globose, movable, but not adherent to the parietes of the abdomen. Pain was persistent from the beginning. After a duration of four months, during which time emaciation became marked, she died. There was no vomiting prior to the second day before death; upon this and the following day she vomited several times.

Post-mortem examination, twenty-four hours after death.—Decomposition had set in. The transverse colon was pushed down, crossing abdomen below umbilicus. The space between it and thorax was occupied by a pultaceous mass of soft cancer. The left lobe of the liver was large, touching the ribs on the side of the left hypochondriac region. The growth was adherent to its under surface, but did not invade the parenchyma. The vertical portion of the duodenum was compressed and contracted in calibre. The first third of this viscus was much inflated. The spleen was very small,—the size of an egg,—of a bluish color externally, and of pultaceous consistence. Parts below transverse colon in no way involved. The stomach connected with the colon in a normal manner.

The growth, therefore, was in the epigastric region originally, pressed the stomach downward from the right side towards the cardiac end; thus causing the stomach to assume a more vertical position, with the effect of throwing the cardiac end well up into the left hypochondrium. It was firmly adherent everywhere to the abdominal walls.

Dr. JAMES TYSON asked whether cancer of the pancreas often reached the size of the specimen exhibited this evening.

Dr. PEPPER said not commonly, although he had met with cases in which the tumor was quite as large as this. Often the adjacent glands are involved at the same time, and thus add to the size of the mass.

Fluid from cyst of the broad ligament, by Dr. H. LENOX HODGE.

On Wednesday, September 8, Dr. H. removed from a patient of Dr. Dare, of Shiloh, N.J., eight quarts of a thin, clear fluid, with a delicate straw tint, by tapping. Its specific gravity is 1007, and it contains no albumen.

This specimen possesses a peculiar interest because of its delicate straw color. The fluid which is considered characteristic of that from a cyst of the broad ligament is perfectly color-

less. This is an exception to the usual rule, or else belongs to some other structure.

The facts in favor of its being from a cyst of the broad ligament are—1, the thinness of the fluid; 2, the clearness of the fluid; 3, the low specific gravity; 4, absence of albumen; 5, no sac could be felt through the abdominal walls after tapping; 6, the incurvation of the abdominal walls after tapping was very marked; the patient was tapped a year ago, and Dr. H. removed ten quarts of fluid perfectly colorless like spring-water, and possessing all the other characteristics of fluid from cyst of the broad ligament.

Dr. PEPPER inquired of Dr. Hodge whether the fluid was often reproduced in these cases after tapping.

Dr. HODGE replied that it was the exception rather than the rule that this should occur, but he had met it in two cases. One was the present, and another was a case tapped by Dr. Atlee several years ago, which subsequently came under the notice of Dr. Goodell and himself, when the fluid was found to have reaccumulated. But, judging from the results in a large number of observations, a tapping may almost be counted a cure. In the present instance the patient had asked him to perform ovariotomy, but he had declined.

Dr. PEPPER referred to Mr. Keith's report of his last fifty cases of ovariotomy, among which are included several cases of cyst of the broad ligament which were cured by tapping.

Dr. HODGE said that Mr. Keith, in this last report of fifty cases of ovariotomy, stated that since 1872 he had been able to cure by a single tapping four cases of cyst of the broad ligament, which tumors would, some time ago, probably, have been removed by operation. The distinction between cysts of the broad ligament and ovarian cysts, and the great tendency of the former to be cured by a single tapping, had been, he believed, earnestly pointed out by Drs. Atlee and Peaslee, of this country, before it was recognized abroad.

Dr. JOHN H. PACKARD presented a specimen of *rupture of the heart.*

Dr. EDW. L. PARKS presented, for Dr. F. F. MAURY, a photograph of a suicide who had shot away nearly the entire frontal bone with a small old-fashioned pistol, which was also exhibited.

OVARIAN TUMORS (*The Medical and Surgical Reporter*, September 4, 1875).—Dr. R. S. Sutton reports a case of ovarian cyst which was successfully removed. From the symptoms and history of the case he concludes that hyperæsthesia of the mammary gland is a symptom of ovarian disease, and that ovarian tumors sometimes grow with great rapidity, and may attain considerable size without eliciting pain or attracting the patient's attention.

REVIEWS AND BOOK NOTICES.

PRACTICAL HINTS ON THE SELECTION AND USE OF THE MICROSCOPE. Intended for Beginners. By JOHN PHIN, Editor of "The Technologist." The Industrial Publication Company, New York, 1875.

A compact, concise, readable, well-printed little book, which will be found valuable by all amateur microscopists. Mr. Phin evidently does not deserve the remark which he so sharply applies to Hogg's advice that in cleansing lenses one ought to use "a piece of leather slightly impregnated with brick-dust!" "Such directions," says Mr. Phin, "show clearly that Hogg is not a practical microscopist, and that in compiling his book he has depended more upon his scissors and imagination than upon his actual experience." Every page of Mr. Phin's book indicates his practical and intelligent familiarity with the microscope, and the work will be found a time-saver in the hands of those who are too busy to hunt out detail given by more voluminous writers upon the microscope. The sharply-cut brevity and concise clearness of the book are delightful; yet in certain sections the author might well have omitted details for which beginners will find no use, and have devoted more space to matters of necessity. He has given four out of one hundred and twenty pages to the description of penny, twenty-five-cent, and other useless instruments,—a clear waste of three pages. We are glad to see that he gives their proper rank to American and English objectives as compared with those of French manufacture, of which he justly says that a French one-sixth will not give as much satisfaction as a good American or English objective of half its magnifying power.

He completely demolishes Frey's sneers at the objectives of the latter make by showing on Frey's own testimony that he (Frey) knows nothing about them. In recommending various low-priced microscopes he has omitted mention of Queen's very good "Student's" instrument. We confess to being puzzled by Mr. Phin's rather tartly expressed objections to the glass stage, which is undoubtedly the most convenient and satisfactory of all. In his section upon the "Magnifying Power" of microscopes he has neglected to describe the process for measuring the power. In his directions for the management of light he recommends the operator to face the window, although a side-light is far less trying to the eyes; and he fails to give the proper value to the use of blue glass between the mirror and the object, when working by artificial light.

These are criticisms, however, which do not lessen the worth of his handy, intelligent, and very desirable little work. We heartily recommend it to beginners, as well as to advanced microscopists. H. O.

GLEANINGS FROM EXCHANGES.

HÆMATURIA (*The Boston Medical and Surgical Journal*, September 16, 1875).—Dr. David Choate reports the case of a man, æt. 40, who was affected with what seemed to be a purely idiopathic hæmaturia, the effect of the changes induced in the system by the lack of proper nutriment and excess of alcohol. Albumen was present, but only in quantity proportioned to the amount of blood, which was always intimately mixed with the urine, and was never passed by itself, either in liquid or coagula. There was neither mucus nor pus present, and no casts could be discovered. The loss of blood continued for about seven months, the patient finally becoming excessively weak and anæmic. All the ordinary astringents were administered; the only one which had even a temporary effect being gallic acid in doses of from five to seven grains every two hours. Hypodermic injections of one-fifth to one-fourth grain of ergotin were commenced, and were continued for five days, when the stomach became irritable, vomiting occurred, and they were stopped. At this time the urine suddenly became clear, and has subsequently continued so. Some twenty-four hours later the patient had a sharp attack of pain in the course of the right ureter, followed by the passage of a small coagulum, apparently moulded by the ureter. The patient gradually recovered from the condition of extreme anæmia into which he had sunk.

AMPUTATION AT THE ELBOW-JOINT (*The Boston Medical and Surgical Journal*, September 16, 1875).—Dr. George W. Say, alluding to amputation at the elbow-joint, says that two considerations have probably deterred surgeons from performing this operation: fear of ulceration of the cartilages, and a long, club-shaped, unwieldy stump. The first has been proved over and over again to be groundless. In many, if not in most, cases, the flaps unite as readily over cartilages as over the sawn extremity of bone. Whether the second objection is of sufficient importance to overbalance the increased danger of higher amputation is by no means proven. It is asserted by good surgical authorities that the redundant size of the end of the bone becomes in time reduced, and leaves a very comely and useful stump. It is admitted by every one that the less the part removed, the greater the chances for the patient's recovery. It is also admitted that the more the sheaths of the muscles and the medullary cavities of the bones are interfered with, the greater are the dangers of pyæmia, osteo-myelitis, necrosis, profuse suppuration, etc. These are certainly strong reasons in favor of joint-amputations.

SYPHILIS OF PARENTS AS AFFECTING THE OFFSPRING (*The Medical Record*, September 15).—Dr. Drysdale cites the following instances in support of the opinion that syphilitic children can only be born when the mother is syphilitic:

A gentleman contracted syphilis in 1850. He married some years afterwards, and now has three blooming children. Another gentleman had syphilis in 1851, and his wife contracted syphilis from him directly. She had no children. Four years later the gentleman married again, and now has a fine family of sons and daughters. Two gentlemen of his acquaintance contracted syphilis to his knowledge, and have had large families of healthy children. The case is not so where the woman has contracted syphilis. A lady contracted syphilis from her future husband, who bit her lip. He was suffering from a secondary affection of the mouth. She married, but had no children by this husband, who died in three years. A few years later the lady again married, and gave birth to a dead child. In view of such facts as he has collected, he feels warranted in assuring his *male* patients that if they have been free from syphilis *some two years*, they will not have syphilitic children should they become fathers.

EXCISION OF THE THYROID GLAND (*British Medical Journal*, August 28, 1875).—Dr. P. Heron Watson recommends attention to the following particulars when excising the thyroid:

1. The external incision should extend from the larynx to the sternum, if the tumor be large and spread widely in a lateral direction. 2. The vessels—arteries and veins—should be secured as they are divided. 3. The fascia should be opened as widely as the skin; and, if the tumor be large, the soft parts may be divided transversely as far as the sterno-mastoid muscles. 4. The delicate investing fascial sheath of the thyroid body should be left undivided until the vessels included in it have been tied. 5. After the mediate ligation of the thyroidal vessels in the cellular sheath, the capsule of the thyroid gland should be opened by stretching through it in the middle line, and the attachments of the goitre carefully divided by blunt-pointed scissors curved on the flat. There should be no tearing away of the gland. 6. If bleeding occur after the separation of the tumor from any of its vascular attachments, the vessels, if they are to be secured, should be tied *en masse* along with the cellular sheath.

A NEW OPERATION FOR THE OBLITERATION OF DEPRESSED CICATRICES (*British Medical Journal*, August 28, 1875).—Mr. Wm. Adams describes an operation for the removal of depressed cicatrices, which consists of the following steps:

1. Subcutaneously dividing all the deep adhesions of the cicatrix by a tenotomy-knife introduced a little beyond the margin of the cicatrix, and carried down to its base. 2. Carefully and thoroughly everting the de-

pressed cicatrix, turning it, as it were, inside out, so that the cicatricial tissue remains prominently raised. 3. Passing two hare-lip pins or finer needles through the base, at right angles to each other, so as to maintain the cicatrix in its everted and raised form for three days. 4. Removing the needles on the third day, and allowing the cicatricial tissue, now somewhat swollen, succulent, and infiltrated, gradually to fall down to the proper level of the surrounding skin.

In two cases of the operation described, one resulting from glandular abscesses in the neck, and the other from necrosis of the inferior maxillary bone, all traces of the depression were removed, and the cicatricial tissue alone could be seen; but it was perfectly on a level with the surrounding skin. In texture and in appearance this cicatricial tissue had so much improved, having lost its shiny, membranous, and vascular character and become thickened and of an opaque white color, that it closely resembled the surrounding skin.

The permanency of the result was beyond all question, nine years having elapsed in one case and three in the other since the operation was performed.

CASE OF RUPTURE OF THE UMBILICAL CORD DURING DELIVERY (*Medical Press and Circular*, September 8, 1875).—Dr. William Haining reports the case of a girl, æt. 18, which presents the following points of interest:

1. It being possible to fix accurately the date of conception, the duration of her pregnancy could not possibly have exceeded 274 days, and was probably only 267.

2. Menstruation occurred for at least four, possibly for five, months after conception had taken place.

3. The labor became completed within two hours after the pains became bad enough to attract attention.

4. The umbilical cord was unusually short, and, although it was quite normal as regarded thickness, the respective sizes of the child and placenta, and the suddenness of the expulsion of the former whilst the mother was in the erect posture, entailed upon it a strain which proved to be greater than it could bear. The child was consequently dropped upon the floor, and died twenty-three hours after birth.

5. Under the circumstances, if concealment had been practised, the crime of infanticide might have been unjustly laid to the charge of the mother, who was ignorant of her condition, having dated the commencement of her pregnancy at the time of cessation of the menses.

THE TREATMENT OF PHAGEDENIC GANGRENOUS VENEREAL SORES (*The Medical Record*, September 11, 1875).—Dr. D. B. Simmons earnestly recommends continuous immersion of the diseased part in hot or warm water, in cases of phagedenic or gangrenous venereal sores. He reports a case which had been undergoing treatment for four weeks, and which was growing worse. Both labia, minora and majora, the fourchette, clitoris, and portions of the urethra had disappeared, and all the region occupied by the external organs of generation had been converted into an immense irregular cavity, discharging an unhealthy, sanious, and very fetid pus. The patient was also suffering much pain, especially if the parts became in the least dry. A sitz-bath of the ordinary size and form is what is required. In this is placed a cushion, or large bathing-sponge, to render more tolerant the long-continued position in the tub, required for obtaining the more satisfactory results. In the case referred to, the matter seemed to be increased by the use of the bath for thirty-six hours, when it began to change in character. Instead of the sanguino-serous pus which was discharged from it before, it had assumed a more healthy, "laudable" form. The ragged edges sloughed off, and their dark-red or purple color presented a bleached-out appearance. From this time the progress of the disease appeared to have been arrested.

Through the dirty gray slough at the bottom granulations began to appear, and the healing up of the part, as far as the extensive loss of substance would admit, was completed in two or three weeks. As uncomfortable as the position was, the patient would not remain out of the bath for a moment longer than necessary, on account of the great relief it afforded from the burning, smarting pain.

After the change for the better had commenced, it was not found necessary to keep her so continuously in the bath, but only on alternate hours. In the interval iodoform was sprinkled freely over the part.

In the male, immersion of the organ in a cup or tumbler of water answered the same purpose. Irrigation might be equally useful. The water should be at as high a temperature as possible.

EXTIRPATION OF THE TONGUE (*British Medical Journal*, August 28, 1875).—Dr. John C. Hirschfeld recommends the following plan of extirpating the tongue, as obviating the risk of hemorrhage and removing various objections which exist to other forms of procedure:

The patient having been put under the influence of an anæsthetic, the lingual arteries are tied. The vessel is exposed by making an incision an inch and a half or two inches in length above and parallel to the great cornu of the hyoid bone, turning up the submaxillary gland, and dividing the fibres of the hyoglossus muscle. The mouth is then opened by depressing the lower jaw; and the tongue is then cut off close to the hyoid bone. If the mouth be small, the aperture may be enlarged by cutting from the angle of the mouth into the cheek.

MODE OF DISTENTION OF THE LOWER BOWEL IN INTUSSUSCEPTION (*Practitioner*,

July, 1875).—Dr. Douglas Morton injected into the bowel of a young infant believed to be suffering with intussusception, one-third each of a pair of Seidlitz powders dissolved in an ounce and a half of water, introducing the carbonate solution first. The escape of gas was prevented, the child was perfectly anæsthetized and its abdomen thoroughly kneaded. Almost immediate relief and ultimate recovery followed.

Subcutaneous Operation for the Relief of Fibrous Anchylosis of the Knee-Joint (*The British Medical Journal*, August 28, 1875).—Mr. C. F. Maunder reports the case of a man, æt. 33, who three years before coming under observation had broken his right patella into three pieces. The knee had been stiff ever since, and he had injured it on two other occasions. Amputation had been suggested. He walked like a man with a wooden leg, swinging the right limb in a half circle. The joint was the seat of firm fibrous anchylosis; the fragments of the patella, and the tibia and femur, being immovable one upon the other. The patient being placed under the influence of chloroform, Mr. Maunder forcibly flexed the leg, the adhesions breaking audibly. There were considerable swelling and ecchymosis afterwards; but no good resulted. Three weeks later the fragments of the patella and their fibrous bond of union were severed from the fibrous tissue occupying the joint. A strong tenotomy-knife was entered on the inner side just above the patella; and, the desired section being made, the wound was closed in the usual way, as in tenotomy; and then the leg was forcibly and freely flexed. On the fourth day, passive movement was commenced, and the patient was encouraged to practise flexion and extension of the leg. He soon became able to perform both these movements, and walked with a scarcely perceptible halt.

A New Operation for the Treatment of Ununited Fracture (*The British Medical Journal*, August 28, 1875).—Mr. Matthew Hill has devised an operation for the cure of ununited fracture which consists, like Dieffenbach's, in driving ivory pegs into the fragment, but is different in all other respects. The old operation entails a large wound in the soft parts, and exposure of the bone,—in short, renders the fracture "compound;" in the new operation this is avoided, the pegging being done subcutaneously. The necessary tools are an Archimedean-screw drill-stock with two or three drills, and ivory stilettes about four or five inches long. The drill and stilettes are similarly graduated in half-inches, and the ivory is, moreover, grooved like a director in order to facilitate its introduction alongside the drill, and afterwards to allow the escape of inflammatory fluids, which might otherwise be pent up in the bony fragments. The *modus operandi* consists in entering the drill through a puncture made by a tenotome; the boring of the bone is next proceeded with, the graduations enabling the operator to calculate his depth to a nicety. The ivory stilette is now filed transversely half-way through, at a distance from the point corresponding to the depth of the hole in the bone; it is next slid down beside the drill, which is then withdrawn, the stilette slipped into its place, lightly hammered, and with a sharp twist broken off at the notch, flush with the surface of the bone. The remainder of the ivory is now withdrawn, and the puncture sealed with a strip of plaster. It is obvious that as many pegs may be introduced in this manner as is thought desirable; in the author's case three were introduced without causing any subsequent mischief or the formation of abscess. The puncture healed kindly and by the "first intention."

Bismuth and Creasote in Infantile Vomiting (*British Medical Journal*, September 25, 1875).—Dr. Edward Mackey has for a number of years used the following method of treatment in cases of infantile vomiting, and with great success.

Purgatives or ordinary astringents being either premised or contra-indicated, a valuable remedy is known in quarter- or half-drop doses of dilute hydrocyanic acid, with a grain or two of soda in camphor or dill water. But in severe cases with much depression, and in many cases as an alternative treatment, bismuth and creasote together will be found extremely good. They may be well combined by dropping a minim of the liquid first upon a small quantity of magnesia, rubbing up with eight grains of subnitrate of bismuth, and dividing into four powders; for elder children, into two. They should be freshly prepared for use, and to infants given gently on a moistened finger-tip every three, four, or six hours. In the intervals a little saccharated lime-water with milk should usually be given.

Eseterine Disks in Tic (*British Medical Journal*, September 25, 1875).—Dr. W. Munro has found that gelatin disks containing one-twenty-fifth of a kilogramme (.0006 grain) of eseterine are of great use in the treatment of tic, being sufficient, as a rule, if there is no persistent cause, to remove the painful element of the disease in from five to fifteen minutes. He mentions that he has used extract of Calabar bean with advantage as a sudorific in cases of incipient bronchitis, congestion of the liver, phthisis with dry hot skin, etc., being always able to bring down the temperature two or three degrees, when sufficient doses were used; such dose being, for an ordinary adult, one-fifth, or at least one-sixth, of a grain, as a minimum, which can be safely repeated every four to six hours till the desired effect is produced, so long as the patient is carefully watched.

Treatment of Club-Foot (*The British Medical Journal*, August 28, 1875).—Dr. W. J. Little believes that a well-treated, successful

case of severe congenital varus can apply the sole and heel properly to the ground, with the toes turned out, and walk at the age of twelve to sixteen months as well as a sound child. His plan of treatment consists in the application of a well-padded, straight splint, at first exactly moulded to the deformity. Gradually, each day, the angle is to be changed, until the foot, from the position of *varus*, assumes that of *valgus*. It should be kept at this for a few days. While this process is going on, the movement of the foot at the ankle should be performed each day. If necessary, the tendo Achillis might be divided, and a splint with a screw used. By this means the surgeon could, in twelve months, obtain a perfect cure, and thus avoid all unnecessary expense to the parents or annoyance to the patient. He considers the following to be some of the causes of imperfect cures or of relapses after apparent cures: 1. Omission of operation at an early period,—the earlier the operation the more perfect the cure. 2. The undue importance attached to the division of the tendo Achillis alone. 3. The use of instruments which keep the patient's foot too long in a fixed position. 4. Neglect or carelessness in the after-treatment. The apparatus should be reapplied every day.

Two Cases of Congenital Dislocation of the Knee-Joint (*The Boston Medical and Surgical Journal*, September 16, 1875).—Drs. Porter and Richardson report two cases in which the knee-joint was dislocated at birth, the displacement having occurred in utero, as was evident from the furrows above and below the joint, and the deposition of vernix caseosa in the angle of flexion. In one case the leg was in a vertical position, the inner malleolus facing towards the umbilicus, and the foot strongly rotated outwards. In the other, the leg was in such an extreme state of tension as to amount to reversed flexion, being turned upward and forward on the thigh, so that the anterior surface of the leg and thigh touched each other, the sole of the foot looking directly towards the face of the child, the toes pointing backward, the heel forward. By gentle, firm traction the dislocation was in each case reduced, and the use of a splint in the more severe instance, and of a simple bandage in the other, sufficed to keep the bones in situ and resulted in perfect cures.

Biliary Calculi extracted through the Abdominal Walls (*The Medical Record*, September 18, 1875).—M. Brousson describes the following case: A patient was suffering from a painful, ill-defined tumor, situated in the right flank, between the spine of the ileum and umbilicus. The tumor was taken to be a suppurating ovary, and was opened with the caustic Vienna paste. The tumor was found to be due to an accumulation of biliary calculi, of which no less than forty were removed. In three months the patient had recovered.—*Journal de Médecine*, Aug. 1875.

Formula for the Combined Administration of Cod-Liver Oil and Phosphorus (*The Medical Record*, September 18, 1875).—Dr. Edward C. Mourn has employed the following mixture with the happiest results, patients taking it readily who could not bear the plain cod-liver oil at all.

℞ Yolk of three eggs;
Olei morrhuæ, ℥viij;
Sherry wine, ℥iv;
Acidi phosphorici,
Syrupi simplicis, āā ℥i;
Aquæ amygdalæ amaræ, ℥viij;
Spiriti vini rect., ℥i.—M.

Rub the eggs up in a mortar, adding the oil spoonful by spoonful. Last of all add the phosphoric acid.

Whooping-Cough (*The Cincinnati Lancet and Observer*, October, 1875).—Dr. Wild reports in the *Wiener Allg. Mediz. Zeit.* that he has succeeded in curing whooping-cough in eight days by the following treatment: The patient is not allowed to leave the room, and at each fresh paroxysm a compress, folded in several layers and saturated with a teaspoonful of the following solution, is held to the mouth. The patient is thus compelled to inhale:

℞ Ether, 60 parts,
Chloroform, 30 parts,
Turpentine, 1 part.

Two Cases of Removal of Omental Tumor from the Scrotum (*Buffalo Medical and Surgical Journal*, August, 1875).—Dr. E. M. Brush reports two cases of removal of omental tumors from the scrotum, one of which was successful. In the other the patient died of peritonitis. In the former case the tumor removed weighed two and a half pounds; in the latter, three and a half pounds. In both there were adhesions all along the inguinal canal and at the abdominal ring.

Hypersecretion of Certain Glands at the Moment of Death by Asphyxia.—M. Bouchefontain read a paper on this subject at a recent sitting of the Société de Biologie (*Gaz. Méd. de Paris*, p. 376, 1875). Experiments on animals showed a great increase in the secretion of the salivary glands, the liver, and the pancreas, at the moment of death by asphyxia. Increase of urine was not observed. M. B. attributes this phenomenon to excitation of the gray bulbo-medullary substance by the poisoned or improperly aerated blood.

MISCELLANY.

Frontier Medical Life in Australia.—The "doctor's residence" is, as you may fancy, a landmark: it flashes in the eyes of John and of the lucky and unlucky diggers miles and miles off. Brilliancy has its disadvantages as well as its advantages, for lots of the diggers—not the lucky ones—trouble me, and ask for a wet. At first, under the idea of

increasing my professional reputation, I gave them a nip out of my private bottle; then I gave them one of pain-killer; but, both being done, I have fallen back on a tin of kerosene, with a good handful of cayenne pepper diffused through it. Of the three kinds of drinks the last seems to have the preference; it keeps the heat out of their stomachs,—one great source of thirst in all hot climates, and particularly in this one we have here, which can scarcely be called hot in the Victorian sense, but "bilin," as a Cockney confidentially informed me,—quite equal to a very warm place, where sinners are supposed to go to.

The blacks about here are a little troublesome; they have a playful way of sticking a spear into a man, and then roasting him afterwards. White man's meat, from its scarcity, these gourmands consider just now a treat, and consequently it is much sought after. I hit upon a capital trick to scare them. I picked up three skeletons of black fellows in my journeys, and with the aid of an old hand—who had been once a dissecting-room porter—we mounted and painted one white, the other two black, and by a little mechanism made them throw their arms and legs about, and then placed them in a row on the roof. It has done more to keep the blacks and whites—the drunken ones—away than you could suppose. The former consider me something more than a wizard, and the latter, if invited, won't enter the hut, for fear I should dose and then make skeletons of them. There was a very big fellow passing the other day. He looks up, and cries out, "Hullo, Doc! have you so few patients that when you kill them you stick them on your roof?" "Yes, sir; they are the only patients I have had, and they all died. The big one in the centre was about your size: his fat has supplied my lamp for the last six months. If you should need my professional assistance, I shall be happy to attend you, and take your body in payment as I did his." He was soon out of sight. I can keep off the two-legged vermin, but the mosquitoes, rats, and horses beat me. As soon as I fall asleep the mosquitoes commence. Their tactics are peculiar: while two keep my attention occupied by blowing their trumpets into my ears, the others sneak down on my feet and legs, and suck themselves full, and then retire, to be followed by a second batch. Nothing can resist their onslaughts. Practice has taught me to rest and be thankful, however deep they may penetrate; "grin and bear" is now my motto. I don't mind the rats, snakes, or any other vermin, but all the stray horses in the neighborhood seem to take a pleasure in making my "tin pot" a place of rendezvous. —*Melbourne Medical Record.*

A METAPHYSICAL DEAD-LOCK. — John Darby, in his new book "Two Thousand Years After," asserts that "nothing is wrong in itself, but that good and bad are alike things of relation;" whereupon a reviewer in the *Medical and Surgical Reporter* takes him to task, asserting the doctrine to be most dangerous, and maintaining "that any careful reading of the laws of mind establishes beyond question the absolute character of the abstractly true, and its total contrast to the untrue. We might as well," says the reviewer, "speak in physics of a union between the zenith and the nadir, as in thought of the really untrue turning, by some metamorphosis, into the true." Whereupon, in turn, a writer in the *Times* (newspaper) begs to be informed by the *Reporter* what the nadir of mid-day becomes to the noon of night. We should name the matter a triangular paradox.

THE CULINARY ART.—The School Board of London has arranged to have three hundred girls selected from its schools taught cookery by the teachers of the National Training School in two centres,—one in Marylebone, the other in Greenwich. Five free scholarships in this much-neglected but important branch of knowledge are offered by the Society of Arts, and the Education Department gives four shillings a year to public schools on behalf of each girl taught cookery according to the recognized code.

A GENTLEMAN in London society being asked by a strong-minded lady friend to suggest a name for their new female progressive club, replied, "The Middlesex."

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 28, 1875, *TO OCTOBER* 11, 1875, *INCLUSIVE.*

MCPARLIN, T. A., SURGEON.—Assigned to duty as Chief Medical Officer, District of New Mexico. S. O. 182, Department of the Missouri, September 28, 1875.

SMITH, J. R., SURGEON.—Leave of absence extended twenty days. S. O. 197, Military Division of the Atlantic, October 2, 1875.

WRIGHT, J. P., SURGEON.—When relieved by Surgeon McParlin, assigned to duty at Fort Leavenworth, Kansas. S. O. 182, c. s., Department of the Missouri.

PAULDING, H. O., ASSISTANT-SURGEON.—Assigned to duty at Fort Ellis, Montana Territory. S. O. 190, Department of Dakota, September 29, 1875.

TAYLOR, B. D., ASSISTANT-SURGEON.—Assigned to duty at Fort Rice, Dakota Territory. S. O. 187, Department of Dakota, September 25, 1875.

WOOD, M. W., ASSISTANT-SURGEON.—Assigned to duty at Camp Sheridan, Nebraska. S. O. 105, Department of the Platte, September 25, 1875.

WEEDS, JAMES F., SURGEON.—Died at Nashville, Tenn., October 1, 1875.

WEBSTER, WARREN, SURGEON.—To report to the Commanding General, Military Division of the Atlantic, for assignment to duty. S. O. 201, A. G. O., October 6, 1875.

JANEWAY, J. H., ASSISTANT-SURGEON.—To report to the Commanding General, Department of the South, for assignment to duty. S. O. 201, c. s., A. G. O.

SOCIETIES.

NORTHERN MEDICAL ASSOCIATION OF PHILADELPHIA, 608 Fairmount Avenue, Friday, October 22, 8 P.M. Dr. E. O. Shakespeare will present and explain the construction and use of a new ophthalmoscope and optometer.